

## **II. REMARKS**

Claims 1-44 are pending. The Applicants' attorney has amended claims 1, 5-6, 9-10, 20, 23-24, 26, 35-36, and 38-42 and has added new claim 44. In light of the following, all of the claims are now in condition for allowance, and, therefore, the Applicants' attorney requests the Examiner to withdraw all of the outstanding rejections. If after considering this Amendment the Examiner does not agree that all of the claims are allowable, the Applicants' attorney requests the Examiner to phone him at the below number to schedule a telephonic interview.

### **Objection To Claim 20**

The Applicants' attorney has amended claim 20 as proposed by the Examiner, and thus requests the Examiner to withdraw this objection.

### **Rejection of Claims 5-6, 9-14, 23-24, 26-29, and 35-43 Under 35 U.S.C. § 112**

#### **First Paragraph As Being Based On A Disclosure That Is Non-enabling**

Although the Applicants' attorney disagrees with this rejection, he has amended these claims to recite a "shaft" about which the beam-reflector assembly rotates. Therefore, the Applicants' attorney requests the Examiner to withdraw this rejection. Furthermore, the Applicants may file a continuation application to continue prosecution of the unamended versions of these claims.

### **Rejection of Claims 1-3, 21-22, 25, and 31 Under 35 U.S.C. § 102(b) As Being Anticipated By U.S. Patent 5,252,816 to Onimaru et al.**

As discussed below, the Applicants' attorney disagrees with this rejection, and thus requests the Examiner to withdraw it.

### **Claim 1**

Claim 1 as amended recites a beam-sweep mechanism that is operable to activate a beam-reflector assembly by exerting a first magnetic force and only the first magnetic force on the beam-reflector assembly.

For example, referring, *e.g.*, to FIGS. 22, 24, and 25A of the patent application, a beam-reflector assembly 3040 includes a magnet 3048, and a beam-sweep mechanism 3042 activates the beam-reflector assembly 3040, *i.e.*, causes the beam-reflector assembly to rotate back and forth about a shaft 3050 and sweep a beam 3070, by repelling and only repelling the magnet 3048 with a magnet 3052. That is, because the beam-reflector assembly 3040 includes only a single magnet 3048, the beam-sweep mechanism 3042 activates the beam-reflector assembly by exerting only a repelling force on the beam-reflector assembly.

In contrast, Onimaru does not disclose a beam-sweep mechanism that activates a beam-reflector assembly by exerting a first magnetic force and only the first magnetic force on the beam-reflector assembly. Referring, *e.g.*, to FIGS. 6A and 6B and col. 4, lines 30-55, Onimaru discloses a cam 2a that includes magnets 2b, which alternate their N and S poles facing outward from the cam. A mirror 6a includes two magnets 6d that have their N poles facing the cam 2a. As the cam 2a rotates, it activates the mirror 6a, *i.e.*, causes the mirror 6a to rotate back and forth about an axis H-H, by alternately attracting and repelling the magnets 6d with the magnets 2b. That is, unlike the claimed beam-sweep mechanism, which activates a beam-reflector assembly by exerting only one magnetic force on the beam-reflector assembly, Onimaru's cam 2a activates the mirror 6a by exerting two magnetic forces (attracting and repelling) on the mirror.

### **Claims 2-3 and 31**

These claims are patentable by virtue of their dependencies on independent claim 1.

### **Claim 21**

This claim is patentable for reasons similar to those recited above in support of the

patentability of claim 1.

### **Claims 22 and 25**

These claims are patentable by virtue of their dependencies on independent claim 21.

### **Rejection Of Claim 4 Under 35 U.S.C. § 103(a) As Being Unpatentable Over Onimaru In View Of U.S. Patent 5,600,120 to Peng**

Claim 4 is patentable by virtue of its dependency on claim 1. Therefore, the Applicants' attorney requests the Examiner to withdraw this rejection.

### **Rejection Of Claims 7, 8, 15-20, 30, and 32-34 Under 35 U.S.C. § 103(a) As Being Unpatentable Over Onimaru**

As discussed below, the Applicants' attorney disagrees with this rejection, and thus requests the Examiner to withdraw it.

### **Claims 7-8**

These claims are patentable by virtue of their respective dependencies on claim 1.

### **Claim 15**

Claim 15 recites a beam-reflector assembly having a first magnet and a beam-sweep mechanism having a second magnet configured for mechanical movement between a first position in which the second magnet attracts the first magnet and a second position in which the second magnet repels the first magnet.

For example, referring, e.g., to FIG. 25A, a beam-reflector assembly 3040 includes a magnet 3048, and a beam-sweep mechanism 3042 (FIG. 24) includes a magnet 3052,

which can move between a home position in which it attracts the magnet 3048 and a sweep position in which it repels the magnet 3048.

In contrast, the Examiner agrees (see p. 8 of the office action) that Onimaru does not disclose a beam-sweep mechanism having a magnet configured for mechanical movement between a first position in which it attracts a magnet of a beam-reflector assembly and a second position in which it repels the magnet of the beam-reflector assembly. Referring, *e.g.*, to FIGS. 6A and 6B and col. 4, lines 30-55, Onimaru discloses a cam 2a that includes magnets 2b, and a mirror 6a that includes two magnets 6d facing the cam. Regardless of the position of the cam 2a, each of the magnets 2b can either attract or repel a magnet 6d, but cannot do both. For example, a magnet 2b having its N pole facing outward from the cam 2a can only repel the magnets 6d regardless of the rotational position of the cam. Likewise, a magnet 2b having its S pole facing outward from the cam 2a can only attract the magnets 6d regardless of the rotational position of the cam. That is, the cam 2a does not configure any magnet 2b for mechanical movement between a first position in which it attracts a magnet 6d and a second position in which it repels the magnet 6d.

The Examiner, however, believes that it would have been obvious to replace each pair of adjacent N and S magnets 2b on Onimaru's cam 2a with a respective single magnet that would meet the limitation of claim 15 to reduce the number of magnets on the cam 2a.

But, as discussed below, the Applicants' attorney disagrees with the Examiner's position because the cited prior art viewed in its entirety does not provide a suggestion or motivation for one to replace each pair of adjacent magnets on Onimaru's cam 2a with a respective single magnet.

It is impermissible for the Examiner to use hindsight in rejecting a claim for obviousness. Here, Onimaru by itself contains no suggestion or motivation to replace each pair of adjacent magnets 2b with a respective single magnet. Therefore, the Examiner seems to be basing her rejection on Onimaru in view of the claimed invention, which does recite a beam-sweep mechanism having a single magnet that can be positioned to both attract and repel another magnet of a beam-reflector assembly.

Furthermore, even if one would have had a general motivation to investigate reducing the cost and/or complexity of Onimaru's cam 2a by reducing the number of magnets on the cam 2a, it is at best unclear whether one would have had a specific motivation to do so after considering the ramifications of reducing the number of magnets. For example, replacing each pair of adjacent magnets 2b with a single magnet might have required that these replacement magnets have an uncommon shape, such as a curvature that matches the curvature of the cam 2a, and/or might have required another technique (other than the technique disclosed in Onimaru) for mounting the magnets to the cam 2a. Such uncommonly shaped magnets and other mounting techniques might have actually increased the cost and/or complexity of the cam 2a; therefore, this increased cost and/or complexity might have motivated one away from replacing the magnets. Furthermore, the magnetic forces exerted by a single cam magnet on the mirror magnets 6d might have adversely affected the movement of the mirror 6a because of less separation between the N and S poles, and thus might have adversely affected the quality of the beam scanning; therefore, this adverse affect on the mirror movement might have motivated one away from replacing the magnets.

#### **Claims 16-20**

These claims are patentable by virtue of their respective dependencies on claim 15.

#### **Claims 30 and 32**

These claims are patentable by virtue of their respective dependencies on claim 1.

#### **Claim 33**

Claim 33 recites a non-motorized beam-sweep mechanism operable to activate the beam-reflector assembly.

For example, referring, e.g., to FIGS. 23-25A, a non-motorized beam-sweep mechanism 3042 activates a beam-reflector assembly 3040 with energy derived from an operator pressing a scan button 3020.

In contrast, the Examiner agrees (see p. 9 of the office action) that Onimaru's cam 2a is powered by a motor 7 as shown, e.g., in Onimaru's FIG. 5B, and thus agrees that Onimaru does not disclose a non-motorized beam-sweep mechanism.

The Examiner, however, believes that it would have been obvious to replace Onimaru's motor 7 with non-motorized assembly for rotating the cam 2a to reduce the electrical requirements of the Onimaru's scanner.

But, as discussed below, the Applicants' attorney disagrees with the Examiner's position because the cited prior art viewed in its entirety does not provide a suggestion or motivation for one to replace Onimaru's motor 7 with a non-motorized assembly.

It is impermissible for the Examiner to use hindsight in rejecting a claim for obviousness. Here, Onimaru alone contains no suggestion or motivation to replace the motor 7 with a non-motorized assembly for rotating the cam 2a. Therefore, the Examiner seems to be basing her rejection on Onimaru in view of the claimed invention, which does recite a non-motorized beam-sweep mechanism.

Furthermore, even if one would have had a general motivation to investigate reducing the amount of power that Onimaru's scanner consumed by replacing the motor 7 with a non-motorized assembly, it is at best unclear whether one would have had a specific motivation to replace the motor after considering the ramifications of doing so. For example, a non-motorized assembly suitable to replace the motor 7 might not have fit within the housing (FIG. 9) of Onimaru's scanner, and might have cost more and might have been more complex to build and install than the motor 7; therefore, these factors might have motivated one away from replacing the motor. Furthermore, a non-motorized assembly might have rotated the cam 2a at a speed that varied too much to maintain a beam sweep having the desired parameters; therefore, this speed variation might have motivated one away from replacing the motor 7.

**Claim 34**

This claim is patentable by virtue of its dependency on claim 33.

**Conclusion**

In light of the foregoing, claims 2-4, 7-8, 11-19, 21-22, 25, 27-34, 37, and 43 as previously pending, claims 1, 5-6, 9-10, 20, 23-24, 26, 35-36, and 38-42 as amended, and new claim 44 are in condition for full allowance, which is respectfully requested.

In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

If the Examiner believes that a phone interview would be helpful, he is respectfully requested to contact the Applicant's attorney, Bryan Santarelli, at (425) 455-5575.

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Respectfully Submitted,

GRAYBEARD JACKSON HALEY LLP



Bryan A. Santarelli  
Attorney for Applicant  
Registration No. 37,560  
155 – 108<sup>th</sup> Ave. NE, Suite 350  
Bellevue, WA 98004-5973  
(425) 455-5575